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India's Growing Conflict between Trade and Transport

Issues and Options

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India's trade performance will deteriorate if it does not adapt to the changing environment in international trade and distribution logistics.

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Policy, Planning, and Research
WORKING PAPERS
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This paper — a product of the Transport Division, Infrastructure and Urban Development Department — is part of a larger effort in PPR to establish an effective framework for helping developing countries adjust to changing distribution logistics practices in international trade markets. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Teresa Lim, room S10-029, extension 34894 (49 pages with tables).

Containerization and multimodal transport arrangements are key features of the radical restructuring of transport logistics in international trade in recent years.

To increase trade, India must tie into this highly organized international trade logistics network — but it has been totally unprepared to cope with the demanding arrangements common among its major trade partners. Peters recommends the following agenda for reform:

- Prepare a strategy for tying into international trade and transport logistics, particularly through containerization. This means organizing India's fragmented systems planning, control, and management, and involving the private sector in organizing logistics networks.

- Create a joint public-private sector task force to establish an agenda for market surveys and system analyses to identify system shortcomings and needs.

- Develop and manage efficient subsystems for shipping, railway, road, and air transport sectors as well as port and warehouse systems.

- Lift import duties on vital equipment and spares.

- Revise the regulatory and control net that now strangles transport. Above all, simplify customs procedures.

- Adapt trade-related banking and insurance arrangements.

- Promote the national freight forwarding industry by relaxing regulations that govern it.

- Encourage the participation of the private sector, particularly through equipment leasing and privatization of such facility operations as container terminals.

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Note: The term 'Logistics' is used in this report in a very general sense to denote all systematic actions aimed at bringing materials from primary sources through all intermediate steps to the end user. It includes transportation, packaging, handling, storage, inventory control, and related information processes, as well as banking and insurance services. In popular terms, logistics is often referred to as the art of 'bringing the right amount of the right material to the right place in the right time and at the right costs'.

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I. SUMMARY

(I) India has been a rather marginal participant in world trade during the early years after independence. The need to consolidate a large and populous economy, to achieve self-sufficiency, and import substitution policies account for much of the reasons for the country's inward-looking orientation of the past. Until recently, Indian economic policy has not treated exports as a priority but in the last few years there has been a growing awareness of the importance of export performance, as the limits of efficient import substitution were reached. The oil shocks created severe adjustment pressures for the balance of payments, and the benefits of having foreign exchange to finance more rapid importation of high technology capital goods in scarce supply have become more recognized.

(II) Since 1980, the structure and orientation of Indian export trades have undergone fundamental changes. Substantial progress was made in diversifying the export base -manufactured goods have increased and the traditional bulk sector has shrunk. Key targets for the export of manufactured goods are the European, Japanese and North American markets. These markets are characterized by increasingly efficient trade logistics arrangements -a trend that was spurred by the shippers' drive to reduce inventory costs, and by the international carriers who initiated significant service restructuring in order to better meet the shippers' more and more sophisticated logistics requirements. Containerization and multi-modal transport arrangements were central to these developments.

(III) To enable further trade growth, India is now confronted with a need to tie into the highly organized international trade logistics networks. But the country was totally unprepared to cope with the demanding logistics arrangements, common among its major trade partners. National planners considered containerization as a state-of-the-art development which would happen only very slowly in India, and little action was taken to prepare the national economy for the events that finally have affected Indian trade in a major way. As a result, there is a real danger that India's trade performance will deteriorate, if no corrective measures are taken.

(iv) A highly fragmented service industry, outdated regulations, heavy Government control, a constrained private sector, and largely inadequate infrastructure have curtailed efforts to improve trade logistics arrangements in India. Major reforms are called for so that an effective framework for initiating urgently required system adjustments can be established. In particular the public corporations, mandated to provide logistics services, have to be substantially reorganized, and the Government's protective umbrella has to be lifted so that these corporations can become more market responsive in competition with the private service industries. The role and participation of the private sector should be substantially enhanced because the few successful service innovations in India were brought about by private companies.

(v) There are plans to invest about US\$ 3 billion each year over the next decade in trade logistics facilities. However, in the absence of a national strategy for efficient organization of trade logistics in India, proposed investments in the service sector often bear little relation to system improvement needs. This fact is compounded by common situations in which existing facilities are not utilized to their full capacity potential because of ineffectual management and cumbersome control procedures. The country needs a harmonized national trade logistics management and development strategy, and its formulation should be given highest priority. Under such strategy, each segment of the logistics system should be assigned a proper role and function -based on considerations of cost-effectiveness and market response.

(vi) Very importantly, the entire setup of the public administration for managing the national trade logistics system has to be reassessed. The present organizational arrangements are excessive which undermines efforts to improve the system's responsiveness to changing trade and transport market environments. It will be vital to include the private sector in these deliberations. Possibly the most cumbersome task will be the absolute need to revise the regulatory framework that governs the conduct of trade logistics services. Going by the experience with similar efforts in other countries, it should be recognized that instituting the required system adjustments will be a major task for which unequivocal Government commitment is a basic prerequisite. Invariably, the process will spread over several years -but it is important to get it started!

II. NATIONAL TRADE DEVELOPMENT

1. Since independence, India has been a rather marginal participant in world trade, as shown below.

Growth of Indian Import and Export Trades

	1950		1986		Compound Growth Rate
	US\$ (bn)	share (%)	US\$ (bn)	share (%)	1950-1986 (%)
World Exports	60.7	100	2,113.6	100	11.5
India Exports	1.2	1.9	9.2	0.4	7.0
World Imports	63.6	100	2,213.1	100	11.5
India Imports	1.2	1.8	14.8	0.7	7.4

(Note: exports on f.o.b. and imports on c.i.f. basis)

Source: UNCTAD Handbook on International Trade and Development Statistics, 1987.

2. The above figures demonstrate that India's foreign trade has grown at a much slower pace than world trade. Actually, both export and import trades as a proportion of global trade have been shrinking. The 1986 share of Indian exports in world trade was only one fifth of the corresponding figure in 1950. As an explanation: markets for commodities which have traditionally formed the backbone of Indian exports -essentially the bulk trades- have displayed very modest growth trends. But over the last few years, the structure of Indian exports has been changing. The share of manufactured goods in the total export structure is increasing, whereas the bulk trades show declining trends; see table below.

Structure of India's Export Trade

Commodity Group	Percent Share		
	1970	1980	1986
Manufactured goods	45.1	57.5	64.6
All food items	29.7	28.2	22.5
Agricultural raw materials	5.6	4.0	3.8
Fuels and Combustibles	0.8	0.4	0.4
Ores and metals	18.5	8.6	7.9
Unallocated	0.3	1.3	0.8

(Note: Comparisons are in terms of value.)

Source: Department of Statistics, Ministry of Planning, GOI.

3. In general and until recently, Indian economic policy has not treated exports as a priority. Instead, the aim was for broad self-sufficiency in most products through import substitution, with exports covering the costs of residual import requirements. In the last few years there has been a growing awareness of the importance of export performance as the limits of efficient import substitution were reached. The oil price increases of 1973/74 and 1979/80 created severe adjustment pressures for the balance of payments, and the benefits of having foreign exchange to finance more rapid importation of high technology capital goods and consumer goods in scarce supply have become more widely recognized.

4. Among the domestic industries which target the export markets, the most important are the engineering -particularly electronics and car manufacturing- and the textile sectors. The engineering industry has become a large and varied component of Indian manufacturing. However, the industry is afflicted by power shortages, excessive regulations, limited supplies of raw materials and lack of access to new technology. In the two sub-sectors electronics and motor vehicles major efforts are under way to boost productivity through liberalization of technology and component imports, simplified licensing, foreign investment and cuts in customs and excise duties. In the wake of these developments, it is interesting to observe how some segments of these industries have started to tie into international production networks. The case can be made about car manufacturing and consumer electronics.¹ After significant value added in India, products out of these industries are then re-exported to overseas markets, particularly in Asia, the Middle East and Africa. This move became possible after substantial production capacities had been established and domestic demand could be largely satisfied.

5. The drive to increase exports of manufactured goods is an important phenomenon of far-reaching consequences for trade logistics management. The same can be said about the changing market orientation of India's export flows. Both observations will be further elaborated below.

Orientation of India's Export Trades in key Markets

Region	Percent Share			
	1960	1970	1980	1988
Asia	12.2	24.5	20.5	20.9
Australia	2.6	2.4	1.8	1.1
Europe	34.1	26.0	28.8	29.1
Middle East	27.5	6.1	10.8	5.8
U.S.A.	5.1	18.1	23.8	24.3
U.S.S.R.	18.5	22.8	14.4	18.8

Source: Directorate General of Commercial Intelligence, Ministry of Commerce, GOI.

^{1/} Two examples are imports of glass for cars from Indonesia and television tubes from South Korea, which represents about 125 Forty-foot containers that are moved to Northern India on a weekly basis.

In percentage terms, the trades with Africa and Latin America are still negligible. However, indications are that much growth will occur in these international market segments over the next few years.

6. While import trades have shown a declining trend as a proportion of world import trades, their volume is still significant. The decline can partially be explained by the inward looking import substitution policies followed by the country. But there is also the gigantic domestic market whose demand needs to be met, which -to some extent- accounts for the low export rates, and possibly also explains the higher import growth rate. Overall, the growth of domestic consumption exceeded that of local production.

Main Sources of India's Imports (1986)

	Percent Share
EEC countries	26.5
Non-OPEC developing countries	18.0
OPEC countries	17.0
COMECON countries	11.1
USA	10.6
Japan	9.1
Others	7.7

Source: The Economist Intelligence Unit, Country Profile India 1987-88

7. Looking at the import sector, it becomes apparent that there is an increasing share of general cargo, which reached 57 percent of India's total imports (in terms of value) in 1986. By 1988, the shares of manufactured goods in the export trades, and of general cargo in the import trades were both approaching 70 percent of total trade volumes. As a final observation: after a prolonged period of relatively stable annual trade volumes, India's export and import trades made annual quantum jumps from 1986 onward.

III. THE PHENOMENON OF CONTAINERIZATION

8. Why is it so important to single out exports of manufactured goods and general cargo imports? Because in each case cargo unitization, and especially containerization offer a significant potential for sizeable efficiency gains in logistics management and reductions in the costs of physical distribution management. During the period 1987-1988 the total tonnage of 'containerizable' Indian export and import cargoes had reached a level of about 16 million. Under the assumption that the volumes of these cargoes would show annual growth rates close to that expected for the economy as a whole (i.e. about six percent), one could

count on an annual incidence of such cargo in the order of 18 million tons by 1990, 25 million tons by 1995 (the end of the 8th Five-year Plan), and 32 million tons by the turn of the century.

9. Containerization of India's trades has started with much delay and at a slow pace. The reasons are explained in the following sections. During 1987-1988, a total of 5.3 million tons of cargo was handled in containers. What was the previous growth record?

Growth of Containerized Trades in India

Period	Million tons
1980-81	1.4
1981-82	2.0
1982-83	2.1
1983-84	2.2
1984-85	3.3
1985-86	4.0
1986-87	4.5
1987-88	5.3

(Note: The average annual growth rate was 21 percent).

Source: Indian Ports Association.

10. Despite the high annual growth rates, the penetration of containers in the general cargo market is still relatively low. The 5.3 million tons of containerized cargo handled during 1987-1988 represents less than one third of the total incidence of containerizable cargo during that period. The target under the 7th Five-year Plan was 50 percent container penetration of national general cargo trades.

Penetration of Containers in General Cargo Traffic
through key Indian Ports (1987-88)

Port	Imports	Exports	Total
(percentage share).....		
Bombay	23	61	32
Madras	25	58	34
Calcutta	10	34	17
Kandla	11	29	18
Cochin	22	63	45
Haldia	38	100	63
Tuticorin	26	17	22
<u>Total</u>	<u>20</u>	<u>49</u>	<u>28</u>

Source: Annual report of the individual ports.

11. What is so important to understand is the fact that India, like any other country for that matter, has no choice but to drastically enhance its capacity to handle export and import cargoes in containers, if trade performance is to be improved. Actual or potential foreign trade partners have come a long way in cutting the costs of physical distribution management for the commodities they buy or sell in the world market. The key ingredient of these arrangements is containerization which allows door-to-door transport, speedy intermodal transfers, low handling costs, reduced breakage and pilferage, and thus less insurance expenses. In fact, most importers in the industrialized countries will only accept containerized cargo.² But much the same can be said about their exports; no seller of goods to India is likely to continue with shipments of cargo in breakbulk.³ It is needless to say that the Indian economy would benefit in a very substantial way through improved competitiveness and higher revenues if further progress in containerization of the export trades could be achieved. In the case of the import sector, this would imply lower costs in production with imported components and reduced domestic retail prices of imported products. At the same time, however, it should be recognized that considerable efficiency gains through containerization can also be expected for the domestic trades. Presently less than five percent of domestic general cargo trades are containerized, much to the chagrin of local traders. During interviews with trading houses that serve the Indian market, these points were forcefully made. In the case of one trader it was speculated that their annual distribution costs of US\$ 182 million, equivalent, could be thus reduced by as much as 25 percent. The likely effect on retail prices is obvious.

12. Attention needs to be drawn to the ever increasing pressure put on Indian exporters by their foreign trade partners. These entities, be they manufacturers, department stores or wholesalers in Europe, Japan or North America, which have become India's main export markets, undergo -almost collectively- very drastic changes in inventory management, which is part of trade logistics.⁴ Reducing inventories implies a considerable scope for cost reductions. But running a business on limited inventories requires speedy and highly reliable supply arrangements. In many cases,

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- 2/ Even worse, they insist nowadays on full-container-loads (FCLs), as they do not want to go through the hassle of having to clear through customs many smaller consignments from different sources loaded into one container, known as less-than-container-loads (LCLs).
- 3/ The low rate (20 percent) of containerization in the import trades is possibly more due to logistics constraints which makes transport service provisions extremely costly because of long handling delays, problems with container repositioning and tracking. Thus it is more the international transport operator than the shipper who tends to go slow with the introduction of more import container services.
- 4/ Interestingly, also trading partners in the Soviet Union -a major client of and supplier to the Indian market- are in the process of instituting modern physical distribution management arrangements.

this goes to the extent that product cost considerations are secondary to effective supply provisions. And, indeed, the Indian trade circles have already had to bear the brunt of these developments, particularly in the garment, shoe and handicraft trades. To ensure that tight supply schedules can be met, about 35 percent of the exports (by value) from Northern India are presently shipped by air -up from seven percent in 1980-, because in many cases combined land/ocean transport arrangements were no longer compatible with the tight delivery requirements. This has been a rapid development, and steep further increases in these trades are expected. Obviously, air cargo is also containerized, and all the observations made above apply.

13. The point has to be made that containerization has value as a trade logistics management concept only if there are effective arrangements that enable swift movements from cargo origin to destination. Prerequisite for efficient container trades are therefore well integrated multi-modal transport networks which allow smooth and speedy transfers from one element in the transport chain to another.

14. In summary, containerization of export and import trades has really been pushed onto India by its foreign trade partners and the transport industries that serve international trade. Much of India's recent export boom and related containerization has been driven by small local manufacturers,⁵ not the traditional large holdings that are often locked into a conservative trade management organization. The small exporters' response to this kind of 'grassroots' intermodalism could be a parallel to the situation in the transport industry, in which innovations by small groups of people is creating modern intermodalism where the larger organizations have stumbled.⁶

IV. LOGISTICS PROBLEMS OF INDIAN CONTAINER TRADES

15. The Government of India (GOI) is well aware of the volatilities in today's trade markets and of the colossal restructuring that continues

5/ In order to overcome the inherent logistics constraints in the container trades and to improve their responsiveness to the demands of their foreign trade partners, two industry associations -whose members are generally smaller manufacturers- have established warehousing for their exports in Germany and the Netherlands, from where they serve the European market. Through these arrangements they have become largely independent of the inherent shortcomings in the Indian logistics service sector.

6/ A group in Bombay had established a successful sea-land bridge service, called Seawheels, which connected the Indian market with Europe. Cargo was transported by sea to Kuwait and from there by truck to Europe. Time and cost savings over 'sea only' transport were substantial (5 days and US\$ 400 per container). The Gulf war put an end to this innovative service.

to take place within international trade and transport circles. While there is a rightful satisfaction over the fact that the country's exports to overseas markets have been booming during more recent years, there is at the same time growing concern over India's ability to effectively adjust to the changing international market environment so that any deterioration in export performance could be timely contained. Furthermore, to increase its exports, India will have to find newer products and different markets. Absorption and assimilation of technology and particularly the introduction of effective logistics arrangements by the Indian industry and service sector will play a tremendous role in such endeavor. If the Indian industry can export goods at prices and under delivery conditions which are internationally competitive, and if it is able to find and cater for newer markets, then Indian trade is bound to grow. In the same vein, if India is able to streamline the organizational setup for managing the logistics of import and domestic trades, then the costs of commodities in the national market will be substantially reduced. The realities are far from it, and there is a real danger that the country's trade performance will deteriorate.

16. Efficient logistics arrangements become more and more important as a prerequisite for successful conduct and development of trade in India. And the quintessential requirement for effective trade logistics arrangements (which have such a significant influence on delivered product costs)⁷ in today's market is containerization. But the container will be instrumental in this respect only if there is a well established framework for its streamlined and -above all- speedy intermodal movement, from origin to destination. Any interruption in this flow chain represents costs which will ultimately be reflected in delivered product prices. In the case of India there are many interruptions in the chain of container movement.⁸ The (arguably avoidable) costs of these interruptions keep mounting, a phenomenon which goes against India's desire to improve its competitive posture in international markets. This is all the more serious as many of the country's competitors in world markets make swift moves to improve their trade logistics arrangements, and the differences in freight costs are telling.

^{7/} Logistics costs, including inventories, warehousing, cargo handling, transport, and insurance, typically range between 25 and 40 percent of final product costs.

^{8/} There is a frequently encountered myth in India: the belief that increased container handling and transport costs due to inefficiencies in logistics arrangements will be absorbed by the service industries, like shipping. The fact is, however, that it is always the buyer at the end of the chain who has to muster the bill; everybody else is passing on such 'inefficiency costs'. In the end, and for obvious reasons, such afflicted buyers will curtail their interaction with trade partners whose logistics costs are inflated by the effects of system inefficiencies.

Comparative Container Freight Rates⁹

	Through-Transport Rates in US\$	
	Destination	
	Detroit	Nuremberg
New Delhi	3,700	2,705
Bombay	3,300	2,305
Bandung	3,120	2,075
Bangkok	2,620	2,075
Guangzhou	2,745	2,350
Nanjing	2,880	2,465
Petalang Jaya	2,520	1,925
Seoul	2,502	2,182
Singapore	2,520	1,825
Taipei	2,770	1,975

(Note: Rates valid on May 15, 1989, per 20 foot container, including precarriage, non-conference sea transport and oncarriage costs. Ocean freight rates were quoted in US Dollars, local transport and freight handling rates were converted into US Dollars at the official exchange rates.)

Source: Lloyd's Intermodal Asia, June 1989.

17. For the 8th Five-year Plan, the Government of India has established a target of 70 percent container penetration in the general cargo trades. A total of 25 million tons of 'containerizable' export and import cargoes is projected for 1995, the end of the Plan period. If 70 percent of that volume would be containerized, there would be a need to move about 1.5 million containers¹⁰ through the national trade logistics system. Is this target realistic? Trade growth has already exposed inherent constraints in the national transport network in the shape of ports, road, rail and shipping systems, that as yet have had little chance of dealing with the numbers of containers that have started to come their way. Clearly, the intermodal sector has a lot of catching up to do. But trying to push the transport industry to change quickly takes

^{9/} The sizeable cost differential between cargo from Indian origins and cargo from other Asian sources is largely due to comparatively high costs of container handling and transport, i.e. pre-ocean carriage costs, in India. Reflecting inefficiencies in local ports, the ocean freight rates out of India are also comparatively high. Except for Indonesia, there is only limited variation among ocean freight rates applicable to the other countries.

^{10/} Assuming 11.7 tons of cargo, on average, per TEU (Twenty-Foot-Equivalent-Unit) in 1995. The revenue cargo per TEU is presently averaging just under 10 tons in India, reflecting a still limited efficiency in container stuffing operations. But as experience builds up, container loads can be expected to increase.

one into the real nature of the Indian economy. Transport, like most other things in India, is run through bureaucratic rules not easily shifted. This is because laws, controls and licenses are the levers through which a highly centralized system of economic management moves India's resources and outputs.

18. Infrastructure, services and control by the public administration are all equally important. However, the infrastructure aspects are possibly the least cumbersome, as capacity expansion needs can usually be identified and met in a straightforward way -provided the required funds are available. There are serious capacity constraints in ports, road and railway networks, and related rolling stock. There are also significant capacity constraints in the national warehousing system. These constraints exert their influence on handling rates, transit times, and cargo turnover to varying degrees. But importantly, many of these constraints are not so much due to physical limitations, they are rather the consequence of poor productivity and heavy-handed control by public agencies.

19. Poor productivity is a sad hallmark of most entities involved in serving the container trades: the ports, railways, inland depots and the national warehousing system. What are the root causes of this situation? They include union influence, protectionist arrangements and undue intervention by the public administration in its different branches (central, state and municipal), limited incentives for facility managers to do a better job, and -unfortunately- also very often limited know-how in modern container management techniques.

20. Government control extends over customs involvement in clearing cargo,¹¹ the regulation of shipping, the operation of ports, railways and warehouses, and the provision of cargo management (e.g. freight forwarding) services. In the case of shipping, ports and railways the influence of the labor unions exacerbates these circumstances.

21. The situation in ports¹² is mostly depressing. Performance indicators for all types of cargo handling are extremely low by international standards. This applies particularly to containers. Despite the low wages in India, the costs of handling containers and their cargo in ports is about 80 percent higher (on a per unit basis) than in more costly Japan or the U.S.A.¹³ The explanation lies in the fact that in India on average 25 workers are assigned to a job for which in the other

11/ Which includes not only import and export trades, but also applies to purely domestic cabotage trades. The control of locally traded commodities by excise agents is equally cumbersome.

12/ Madras is a notable exception. The port has good and imaginative management, relatively well run facilities, and undergoes a significant expansion program with assistance from the ADB.

13/ A comparison with Singapore is even more drastic. The cost of handling a Twenty-foot container in the city state's port is US\$ 100, compared with US\$ 218 in Bombay and US\$ 170 in Madras.

two countries five workers are required, and these five workers accomplish about three times the daily output of their 25 Indian counterparts. High staffing levels and poor productivity afflict also other elements of the trade logistics service industries. Indian flag carriers have about three times the crew size of their foreign competitors. The serious overstaffing of the Indian railways is a well known and documented fact. The same observation applies to warehouses and inland container depots.

22. Equipment availability for cargo and container handling and transport is low. Inefficient maintenance practices, obsolete technologies and poor management -and thus many units being out of order- account for much of this fact.¹⁴ Furthermore, in critical segments of the logistics network there is a serious limitation in numbers of available units, regardless of the management and maintenance arrangements. This applies for instance to flatbed cars for rail transport of containers, and special handling equipment in ports, inland depots and warehouses, such as gantry cranes, heavy duty loaders and yard trailers.

23. The effects of these constraints are long waiting times for ships and containers, which completely defeats the advantage of containerizing cargo. These waiting times are often excessive and add measurably to the costs of cargo movement.¹⁵ Rail transport of containers to and from Northern India (where about 70 percent of the Indian export trades originate) takes between 10 and 25 days. Technically, this move could be accomplished in three days. In addition, tariffs for containers handling and transport are inordinately high in ports and on the railways.¹⁶

24. But the technical problems -serious as they are- are dwarfed by the sheer overwhelming maze of regulations, control and interference by public institutions in the processing of all trades in India, be they export, import or purely domestic trades. Everything has to be minutely documented, and the documentation requirements are excessive. For import

^{14/} Procurement of spare parts is frequently delayed because of financial constraints, which is further aggravated by the required payment of 80-100 percent import duties.

^{15/} Container charges at Bombay port were increased by 44 percent in January 1989 (rising from US\$ 186 to US\$ 238 per TEU) as a result of real or 'artificial' capacity constraints, and resulting excessive waiting times for ships and cargoes.

^{16/} The transport of a whole wagon load of garments or handicrafts -two of today's key export items- in breakbulk form from New Delhi to Bombay or Madras costs only about one third of the same railway service for a Twenty-foot container. It is thus understandable that many Indian shippers have little predilection for containerizing their products.

clearance a total of 23 documents have to be prepared.¹⁷ In the export trades 118 pieces of paper are needed to get a consignment to its destination. On average 22 hours are spent in preparing the various forms required for each consignment. These facts have to be measured against changing documentation practices elsewhere in the world.¹⁸ Most notable is, however, the rapid progression of computer-aided 'paperless trading' which has also taken hold of trade centers in Asia.¹⁹

25. If documentation requirements are already excessive, the effects on time and costs of cargo inspection and clearance arrangements are simply unequalled. For export clearance, 258 signatures are required, it takes on average six weeks to obtain an import license, and 21 days are required for customs clearance.²⁰ It is estimated that about ten percent of the value of traded commodities²¹ is spent in paper work and going through required procedures.

26. Beyond their obvious effects on time and costs, these cumbersome practices exert considerable influence on the organizational arrangements for container logistics. And, again, the potential advantages of containerized trades are defeated. First of all, very few import containers move beyond port perimeters under bond.²² Customs usually

17/ Although there exists an arrangement, called Open General License (OGL) which was established by Customs with the aim of reducing import trade control barriers. About 80 percent of all imports are governed by OGL provisions. But in the end, OGL did not produce the intended effects as overly strong preoccupation with protecting the country's industries against imports, and collecting import duties was overriding.

18/ Container moves between Asia's newly industrialized economies and North America or Europe are usually handled with less than five documents.

19/ For instance, almost one fourth of Singapore's trade and related transport transactions are presently organized without conventional documentation. It is expected that more than 50 percent of these activities will take place 'paperless' by 1992. Importantly, there are similar developments in other regional countries.

20/ Customs officials fear that officers delegated to high-intensity export operations will start sympathizing too much with trade. This is a fear partly borne out in the abuse of customs privileges at some of India's export-oriented manufacturing zones, but it is garded against largely at the expense of the smooth flow of trade.

21/ The Federation of Freight Forwarders Associations of India estimates that the cost burden is about 375 per TEU.

22/ Less than ten percent of import containers move inland without customs inspection in ports. They are carried by rail and have to be submitted for customs inspection at government-run inland container depots. If a shipper wants to arrange for truck transport of a bonded container, a security amounting to 2.5 times the declared value of the container's content has to be deposited.

inspects ten percent of all containers. But this is not interpreted as that percentage of all units, rather ten percent of each container's load is inspected. Many shippers prefer truck transport of their containers, once cleared by customs because of the unreliable and time consuming rail services, and because of the advantage of direct delivery. And yet again customs comes into play by not accepting containers as a carrier²³ but rather as vessel equipment. Thus for each container leaving a port, a security deposit of US\$ 3,000/TEU²⁴ is required, and the unit has to be returned within 60 days. More recently, international carriers have been able to arrange for 'revolving bonds'.

27. Much of the above can also be said about the still limited domestic container trades. It is just that instead of the customs authorities one deals with the excise bureaucracy. In short, it becomes easily apparent why almost one fourth of the costs of Indian container trades is due to a mindless paperchase. But possibly even more consequential is the resulting damper put on further advances in cargo unitization.

28. Finally a word about communications. Judging by ongoing developments elsewhere in the world, much efficiency in container trades is achieved through electronic networking. Through these networks information is swapped on trade and transport markets, freight rates, ship movements, available capacity in ports, depots, railways, trucking -and also customs services. Bills of lading are electronically transmitted, and customs authorities in increasing numbers turn to preclearance of cargo on the basis of information thus received. Most importantly, electronically transmitted messages allow substantial improvements in the management -and thus utilization- of logistics facilities, and traders have a better way of scanning the markets for more demand-responsive sales and arranging for cost-effective logistics provisions. In fact, the entire international trading community and the service sector are progressively interconnected, including importers, exporters, transport operators and infrastructure facilities, agents, freight forwarders, brokers, banks, and insurance companies. The facilitating -and logistics cost reducing- effects of these technologies are very real in today's market, and many countries make swift moves to tie into the available networks.²⁵

^{23/} In fact, to be effective, the container has to be the carrier and ships, railways, trucks or airplanes are merely the propulsive units.

^{24/} Which is excessive, considering that a Twenty-foot container presently costs about US\$ 1,800 in the international market.

^{25/} Much pioneering efforts have gone into these arrangements by various UN agencies, in particular the Economic Commission for Europe (ECE). Under ECE's auspices a universal system, syntax and standard formats for trade and transport related networking have been developed, called EDIFACT (= Electronic Data Interchange for Administration, Commerce and Transport). Following its incursion in Europe, EDIFACT is progressively being introduced in many other economies in different regions of the world, including developing countries in increasing numbers.

29. Only very few of such facilities are available in India. Those who have taken action are some foreign carriers realizing that their business in serving the Indian market had become so bogged down through related inefficiencies which had started to affect the overall performance of their global service network.²⁶ Bitter complaints about this situation are expressed by industrialists, traders and providers of logistics services. There is an eerie sentiment in many quarters of 'loosing out to the foreign competition'. But in India, there is another issue which undermines any effort to streamline documentation procedures. Because there is no officially endorsed concept of combined transport of goods²⁷ -an important requirement for effective container trades- there is also no multi-modal or combined transport document. Thus separate documents have to be issued for each mode that carries a container. Compounding these arduous requirements is the fact that under existing regulations, each mode has different liability provisions.²⁸ These provisions were established decades ago, and thus insurance coverage by domestic carriers, especially the railways, are totally inadequate for traded commodities in today's market.

30. There is also much confusion over the ownership of goods, once dispatched by an Indian exporter. Under existing legislative provisions, export cargo is considered as such by the authorities once it has been physically placed on a ship, and an ocean bill-of-lading is issued. Negotiability is thereby impeded. Thus a shipper cannot process his documents, like letters of credit through the banking system, until such act has taken place. The transmittal of the various documents to a bank that in turn would liquidate documentary credits, is inordinately long. Consequently, the shipper is deprived of his rightful cash claim for a long time which unduly curtails his financial flexibility. The story could go on and on. The upshot is, however, that totally obsolete and a bewildering variety of documentation and liability arrangements for different providers of logistics services impose a heavy burden on container trades in India.

^{26/} For instance, American President Lines (APL), with 70 years tradition in serving India and catering for almost two thirds of the country's overseas container trades, has linked its Indian network through a company-owned trade and transport information satellite. Thus APL's communications, say, between New Delhi, Madras and Bombay are handled on line, with under four seconds response time.

^{27/} The Government still pursues a policy of treating each element of the transport chain separately.

^{28/} An exception applies to foreign carriers who can issue combined transport documents under one insurance coverage, provided their insurers -mostly the international P&I and TT clubs- are willing to cover the risks involved.

V. THE PROVIDERS OF TRADE LOGISTICS SERVICES

31. The number and variety of actors on the scene are confusingly diverse. It is best to distinguish them by function; they include:

- * the transport industries, i.e. ocean and coastal shipping;²⁹ the railways, trucking, air transport and to a much lesser extent inland waterways transport.
- * the entrepot system, including ports, terminals, airports, inland depots, freight stations and warehouses;
- * the cargo management services, comprising shipping agents, consolidators, freight forwarders and clearing agents; and finally
- * the shippers either acting on their own behalf or through trading houses.

The Transport Industries

32. Ocean Shipping: India's fleet expanded from just over 300,000 Gross Registered Tons (GRT) in 1948 to 6.8 million GRT in 1987 (representing 0.4 percent and 1.7 percent of the world's tonnage, respectively). There are 52 shipowning companies with the public sector's share in the national fleet amounting to almost 60 percent.³⁰ The majority of the Indian fleet are bulk carriers. Until recently, only three companies owned 96.6 percent of the country's liner tonnage -which is the source of container carrying capacity. These companies included: the publicly owned Shipping Corporation of India (SCI), and the private carriers India Steamship Corporation and Scindia Steam Navigation, the oldest shipping venture in India with a tradition bridging more than 100 years. But after a long period of faltering fortunes, Scindia went into bankruptcy early this year.³¹

33. Scindia's fate seems to reflect an ailment that afflicts the entire Indian shipowning establishment: financial difficulties. The private shipping industry is indebted to the tune of US\$ 600 million, and this amount is substantially higher if one includes the publicly owned shipping assets. The net worth of the industry as a whole is negative,

^{29/} India has also inter-island shipping services, but they are less important in the present context.

^{30/} In 1951, the private sector owned 98 percent of India's fleet.

^{31/} Discussions are being held to incorporate Scindia's assets into SCI.

with an average equity/debt ratio of 1 to 68. National shipping companies in increasing numbers are not able to service their debts.

34. At its own peak as a company in the 1970s, Scindia represented the high point of an alliance between India's nationalistic private shipping companies and Government money, surpassing the backing of any other industry. India's development oriented Merchant Shipping Act of 1958 was intended to feed massive funds to the private shipping sector to build Indian ships for Indian cargoes -a goal of self-sufficiency in the early search for economic independence. But the open-ended approach to tonnage supply was not changed even after world market demand for shipping altered radically from 1974 onward. If anything, the flow of cash was liberalized further with the so-called 'needs based' finance policy. The resulting case-by-case mentality also signified that 'needs-based' came to mean exactly what it said: whoever appeared to need money the most got it, regardless of the real strength of the company and regardless of the wider market situation. But with income failing to recover in the wake of successive recessions in the world market, a debt trap developed. Assets could not be realized by sale because asset values had dropped far below outstandings, and the ships Indian owners had acquired got poor rates with little income to diversify. The 'needs based' system then too easily changed from funds for new ships into something else: emergency budget support, with a moratorium here and rescheduling there -all precedents which, once set, soon became politically very hard to end.

35. The role of the Shipping Development Fund Committee (SDFC) was critical in all these developments. SDFC was abolished in late 1986, with liabilities totalling US\$ 352 million. A new instrument, the Shipping Credit and Investment Corporation of India (SCICI) was formed to take over ship finance matters. SCICI has now a plan to restructure the debt of the ten strongest companies. The plan is not without demands as seven of the companies will have to be merged. Will SCICI succeed? That is still difficult to assess. But an indication of SCICI's different mode of operation is its recent exercise to raise US\$ 50 million from foreign markets. This might allow it to provide foreign currency loans to Indian shipowners who have faced difficulties in raising foreign exchange, particularly as India has rigid foreign exchange controls.

36. Unfortunately, things will not be as easy as it may sound. Because of their continuing financial plight, Indian shipping companies have not been able to modernize their fleets in line with market developments. These realities are compounded by the fact that Indian carriers have to order newbuildings and arrange for ship repair in domestic yards on a preferential basis. Indian yards reportedly produce ships at a cost which is about 40 percent higher than the international market prices,³² and delivery times exceed internationally acceptable

^{32/} Similarly, Indian carriers have to buy locally made containers on a priority basis. But such containers are more costly than identical units manufactured for instance in South Korea (US\$ 2,500 versus US\$ 1,800 for a Twenty-foot container). Apparently, much of this difference is due to a high tax on steel in India.

standards by substantial margins. As a result, India's share in general cargo trades is still dominated by conventional cargo liners.

37. Initiating India's deep-sea container fleet has suffered innumerable false starts over the last few years. Various plans to buy or order new tonnage have abounded but to no avail. The failure to invest in cellular tonnage has occurred in spite of an accelerating flow of containers on India's main liner trades, and it means that Indian shipping has been losing out in this respect to foreign carriers. Only about ten percent of Indian container traffic is carried by domestically owned vessels. Both India Steamship and SCI have taken steps to enhance their container services but their ability to implement any further improvements and -notably- to provide competitive services against foreign operators, will depend greatly on whether resources are available for further fleet modernization. Because of the lack of investment in modern and purpose-built vessels, the Indian fleet has very limited container capacity. It does not include a single fully cellular container ship. The only fully dedicated vessel is India Steamship's RoRo containership of 1977 vintage -the Indian Courier- with 393 TEU capacity, which is used for regional feeder services. The composition of the SCI fleet illustrates this predicament, with just over 10,200 TEU carrying capacity spread over 30 traditional combination vessels of considerable age. Overall, the Indian fleet is ageing with 80 percent of the tonnage more than ten years old. Scrapping of older, inefficient tonnage is long overdue. Several liner managements would like to arrange for scrapping of such undue liabilities, but the Government's insistence to approve any proposed fleet consolidation usually implies long delays in taking such action.

38. Earlier on there was a proposal to form the Indian Container Lines (ICL) grouping as an all-India container carrying consortium, including SCI, Scindia and India Steamship.³³ The intention was to beat the heavy foreign competition. And this competition is strong, comprising 30 lines or consortia, and some 25 independent feeder operators.³⁴ Much to the dismay of Indian shipping companies, the foreign carriers pursue very aggressive marketing strategies and have established efficient service arrangements.³⁵ The strong point of these foreign carriers is

^{33/} The idea was not further pursued after the Scindia dilemma.

^{34/} It is intriguing to note such heavy involvement of foreign carriers in the Indian market, despite its serious shortcomings in logistics arrangements. The only plausible explanation appears to be that foreign carriers place a lot of expectation in the future growth of Indian container trades, and they want to become timely involved.

^{35/} Most of these carriers serve the Indian market through feeder operations out of Colombo, Dubai or Singapore. Only two groups -Hoegh Lines and the Cobra Consortium- call on Indian ports with mainline vessels. However, these vessels are relatively small (usually less than 1,000 TEU capacity). The other carriers do not provide mainline services either because of the notoriously low productivity in most Indian ports, or because of the still relatively thin container trades into and out of India, which does not warrant calls of the costly mainline ships.

their experience in dealing with container trades and multi-modal transport operations, which the Indian lines do not possess to the same degree.³⁶

39. Because they are in a competitive disadvantage, the Indian shipping lines -and especially SCI- do everything possible to sabotage any plan to introduce cost-reducing container service arrangements by foreign carriers. They often succeed in pulling in the Government to take prohibiting steps.³⁷ SCI has also been able to obtain Government approval to sit as managing agency in many nodes of the container transport chain, such as the inland depots. Thus they have established an effective network for gathering intelligence on who is contracted for container moves, and what the contractual arrangements are.

40. Obviously, this kind of market intervention carries a heavy price in terms of container moves. The Indian shippers and their foreign trade partners are not particularly happy about these circumstances. But ironically, it has to be said at the same time that, although the Indian trades are covered by 29 different conferences in the ocean shipping sector, most shipping services are provided outside the confines of conference rules. This includes national as well as foreign lines. In this respect the Indian scene is truly exceptional.

41. The fallacy for Indian lines, notably for SCI, is that they have no tonnage capable of competing at attractive rates and -indeed- with the efficiencies of handling containers in today's market. Earlier on, they chartered cellular ships or arranged for slot charters with foreign carriers. These arrangements were cost-effective and provided an acceptable basis for service provisions. However, in the wake of the current surge of international demand for container carrying capacity, the lease contracts were not extended.³⁸ Thus Indian carriers with ambition to compete in the container trades are largely left out in the cold. In the meantime, their foreign competitors made handy profits from a steep surge of seatriade volumes on the world market during 1988.

42. If the prospects for Indian carriers of having a fair share in internationally traded general cargo, and especially in the container markets are bleak, they are even bleaker as regards domestic coastal

^{36/} In fact, looking at selected productivity rates reveals a rather discouraging picture. For instance, in Madras SCI loads or unloads containers from its ships at a rate of eight TEU per hour; foreign carriers -essentially feeder ships- handle 16 to 18 TEU in the same time.

^{37/} APL wanted to arrange for priority berthing in the Port of Madras for a proposed regular service with a mainline cellular vessel of 2,800 TEU carrying capacity. The Ministry of Surface Transport's port wing cleared this proposal which could, however, not materialize due to opposition from the Ministry's shipping wing, as a result of SCI intervention.

^{38/} In the same vein, newbuilding prices have increased and yard capacities are occupied for several years in advance.

shipping.³⁹ Coastal shipping services in India can be provided by national flag carriers only. In 1952, the cabotage trade of general cargo represented about 50 percent of total coastal ship movements. Today, there is practically no general cargo moved in the coastal trades. Advances in the land transport networks and appalling port performance records account for much of these developments.

43. The Railways: When the need for effective inland distribution of containers escalated into a serious issue, the Government's first reaction was to use India's extensive national railway network -the largest in Asia- as the main system. But the railways had too little time left over after organizing movements of essential bulks, to give the specialized attention needed for container traffic that is high in value. Aggravating this situation -and biasing the minds of railway managers- was the fact that container volumes make up less the 0.05 percent of Indian rail goods traffic. Thus arrangements for efficient container traffic management did really not materialize; this traffic was actually treated as a marginal, and often unwelcome activity by regional rail managers.

44. In the meantime, the Government instituted rules which made inland transport of containers by any mode other than railways extremely cumbersome. In support of the railway operations, the development of inland container depots (ICDs) was initiated. These ICDs were to serve as cargo clearance centers and as facilities for stuffing and stripping of containers outside the already congested ports. Further details on the ICD system are given below.

45. In the operating mode, Indian railways have introduced flatbed cars that are designed to carry Twenty-foot and Forty-foot ISO⁴⁰ containers, as well as Eight-foot domestic containers.⁴¹ Under current arrangements, rakes with a capacity to transport 70 TEUs are in use. Since these rakes compete with other cargo and passenger trains for the same track in the heavily trafficked corridors between Bombay or Madras and Northern India, they are frequently delayed because they are shunted onto sidings to give way for what is considered higher priority traffic. Thus there are the excessive transit times which were reported earlier. Apparently there are now new cars being designed to get 105 TEUs into the same train length, a productivity gain which will be critical with the expected throughput by the end of the century, requiring three container trains a day -rather than per week- on the busy lines between Bombay, Madras and New Delhi.

^{39/} Income generated by coastal or inter-island shipping of general cargo could potentially mitigate to some extent their poor financial performance in the international trades.

^{40/} International Standards Organization

^{41/} Permission to use ISO sea containers in domestic trades was given in 1984 only.

46. There is much aggravation among shippers over the frequent inability of the railways to provide information about the departure and arrival of container trains. This fact undermines any effort to organize the speedy and reliable deliveries which are ranking so highly in the decision-making behavior within international trade circles. The upshot of these dismal circumstances is that much investment will have to go into track modernization, acquisition of purpose-built hauling equipment, and the installation of effective communication systems if the railways want to fulfill their assigned function in container inland distribution efficiently.⁴² But most importantly, the attitudes of railway management with regard to container transport have to be changed.

47. A situation which further undermines the effectiveness of the railways in facilitating inland container moves are the existing tariffs, which actually discriminate against transport of containerized cargo.⁴³ Thus many shippers and consignees in India have identical apprehensions and consequently, a substantial volume of containerizable cargo continues to move in breakbulk form. At the bottom of these realities is the fact that most commercial criteria applied by the railways are still derived from the basic legislation which was established a generation ago. Urgent reforms are required in this respect. The same observation applies to the liability provisions currently in use by the railways for cargo -and therefore also container- traffic. Compensation for cargo loss or damage during handling or transport by the railways is totally inadequate, because the compensation amounts reflect market conditions prevailing in the 1920s.

48. Trucking: When asked, most shippers in the Indian market would state that they prefer truck transport of containers over rail transport -despite the fact that such transport is at their risk in the case of on-carriage after customs inspection. Truck transport allows higher operational flexibility and -most importantly- door-to-door deliveries.⁴⁴ These attitudes prevail, despite the fact that trucking rates for containers are not more favorable than the tariffs charged by the railways. Quite often, trucking rates are high because of special chassis requirements for container transport, which is expensive.⁴⁵ All told, it

^{42/} There is also an urgent need to expand the available stock of containers, particularly for the domestic trades.

^{43/} Complicating matters further, the railways also apply surcharges for non-ISO units, such as high-cube and longer than Forty-foot containers, which are increasingly used in international trades.

^{44/} Trucking an import container from Bombay or Madras to Northern India is usually accomplished in less than 20 percent of the time required for the same move by rail. Users of trucking services report substantial efficiency gains in container management. The experience points to an average of 65 km per day haulage performance by train, compared with about 400 km per day by truck.

^{45/} There are also instances of high trucking costs but this largely due to the requirement that the empty containers have to be returned after stripping its content, and the associated expenses incurred by the trucker are included in the freight rate.

is really the time element that influences shippers' modal preference. However, existing customs rules impede trucking arrangements considerably. Bonded containers can be moved without regulatory constraints by rail but not by trucks because there are the heavy security requirements in terms of financial guarantees to be given by the operator. About 80 percent of trucking services available on the local market are offered by small entities -in most cases owners-operators. These small-scale enterprises simply do not have the financial means to provide such guarantees. Thus trucking is no real competition for the railways under current conditions, which on one hand makes the railways' management possibly more complacent, and on the other hand represents a significant avoidable logistics cost component.

49. Unfortunately the situation is not quite as simple as it may sound. Even if trucking was put on an equal footing with railways, there are severe constraints in terms of equipment and infrastructure. Trucks with the carrying capacity and axle configuration required for hauling loaded ISO standard containers are still in extreme shortage in India. Furthermore, the existing road and bridge infrastructure has substantial geometric and structural shortcomings that put a damper on widespread use of heavy container road haulage equipment.

50. But the demand for 'putting road transport on equal footing with the railways' as far as container inland distribution is concerned is very real among trading circles in India. At the very least, shippers ask that trucking services be liberalized to the extent that more efficient multi-modal land transport arrangements can be organized. Going by the experience record of other countries that have gone through the containerization process, this demand is plausible and should be supported to the extent possible.

51. Air transport: The rapidly growing trend to ship export cargoes by air was already indicated. Most of this cargo comprises manufactured goods -not necessarily all of high value- destined for the European, North American and Japanese consumer markets. The services are provided by a variety of carriers that serve the Indian market, although the Government encourages the use of India's international flag carrier -Air India.⁴⁶ Today, the bulk of these shipments originates within the larger metropolitan areas around the major international airports, because it is here where most manufacturing activities are still concentrated. But there are developments elsewhere, for instance in Rajasthan, of increasing production activities in the merchandise sector whose outputs⁴⁷ are targeted for the consumption centers in overseas markets. To ensure success, these regional industries are critically dependent on effective air transport arrangements, which are presently difficult to organize.

52. The increasing volume of air cargo implies that the conventional combined passenger-cargo configurations of airplanes do not suffice much

^{46/} The carriers that serve within the domestic markets, in particular Indian Airways, concentrate mainly on passenger service. Their annual cargo volumes are relatively small.

^{47/} Particularly textiles, garments, handicrafts and artware.

longer. All-cargo carriers are required, and these are in short supply anywhere in the world because the phenomenon of cargo air transport is not limited to India.⁴⁸ Air India's cargo services have brought the carrier to its capacity limits. Foreign carriers are still reluctant to fill the growing gap with dedicated equipment because of the logistics problems on the ground.⁴⁹ As an exception, Aeroflot has entered the market with its heavy-lift, military style equipment to haul import and export trades between India and the Soviet Union.⁵⁰

53. Indian shippers make the point that jet-powered cargo air transport -common elsewhere- is not necessarily a must for the Indian situation. The need is to reduce long transit times of merchandise transported to overseas markets by ship. Cutting such transit time from three weeks (exclusive ocean transport) to, say, four days (by air) would fully serve their actual or potential foreign trade partners' requirements. To achieve such target, more conventional air transport equipment⁵¹ would suffice.

54. The constraints are, however, not limited to air transport equipment but are very real also on the infrastructure side. This applies to land-side storage facilities at airports, runways, navigation systems, and physical interfaces between the air and land transport modes. The steep increases in air transport of Indian exports over the last few years have certainly contributed to improved trade performance, but inevitably, these growth trends will taper off rapidly, as capacity constraints build up. Much of the recent efficiency gains in export trades is therefore likely to be sacrificed again.

The Entrepot System

55. Ports: Since independence, there has been a significant increase in the number of ports in India. While the country had only four major ports in 1950, today the international shipping community has a

^{48/} In most Asian economies there have been rapid increases in airborne exports and imports. In addition, there is a growing trend within the region to organize combined sea-air shipments. The premise behind this development is that cargoes can be moved between origins and destinations at half the time of the 'sea only' move but also at half the costs of the 'air only' transport.

^{49/} Essentially the same observations made in the context of surface transport apply.

^{50/} In early 1989, Aeroflot started to carry Twenty-foot ISO sea containers on an experimental basis. If the experiment succeeds, this arrangement will represent a major revolution in multi-modal container transport.

^{51/} For instance, turbo-prop driven airplanes which should, however, be designed to cargo-only configurations.

choice among 10 such ports.⁵² In addition, there are 139 ports of smaller scale along the national coastline, which extends over 5,000 km.

Traffic handled during 1988 at India's Major Ports

Port	Total Traffic(in million tons).....	Container Traffic
Bombay	29.567	3.130
Madras	22.819	0.903
Kandla	16.194	0.335
Visakhapatnam	15.371	0.010
Mormuago	13.332	-
Calcutta/Haldia	12.903	0.620
Cochin	6.802	0.252
New Mangalore	6.107	-
Paradip	5.187	-
Tuticorin	4.146	0.082

Source: Indian Ports Association

56. These major ports handled about 90 percent of the total national seaborne cargo throughput. While the total volume increased from just over 19 million tons in 1950 to almost 133 million tons in 1988, the magnitudes involved are modest by international standards for an economy of India's size.⁵³ This manifestation serves to stress again the consequences of India's prolonged inward-looking policies in the trade sector. But now that trade volumes are on an upward trend, the ports have quickly turned into major impediments to further trade expansion.

57. In most Indian ports, annual traffic volumes have reached levels which are uncomfortably close to capacity limits. Observed occupancy ratios at container and general cargo berths range between 70 and 90 percent in the major ports.

^{52/} Once inaugurated later in 1989, Nhava Sheva will be among the country's then 11 major ports.

^{53/} The annual incidence of seaborne cargo in Shanghai exceeds the collective cargo volumes of all Indian ports.

Aggregate 1988 Commodity Volumes versus Handling Capacities⁵⁴
in India's Major Ports

Commodity	Volume	Handling Capacity
(in million tons).....	
Various (Containerized)	5.300	4.800
Various (Breakbulk)	22.350	21.650
Petroleum Products	55.250	67.350
Fertilizers	3.900	12.180
Iron Ore	41.500	35.000
Coal	6.250	10.500

Source: All India Shippers Council

58. What becomes readily apparent is the inescapable fact that the national port system is likely to collapse under the load of growing traffic volumes before long. This is a high price the economy will face for the years of voluntary neglect. Looking at the container trades which have the potential of reaching 25 million tons by 1995, even the addition of Nhava Sheva in 1989 will not provide the necessary capacity to handle these volumes efficiently.⁵⁵ The 70 percent containerization target that the Government contemplates for the 8th Five-year Plan, has therefore no real basis. The consequences for national trade development become painfully obvious.

59. In many respects, the ports have been caught by surprise. Containerization, increasing ship sizes with complex navigation and deep draft requirements, growing pressures by the trading community but also by ship operators for faster and reliable services are all phenomena for which most of the national ports were totally unprepared. These ports are stuck with configurations of sea- and land-side infrastructure designed for ship and cargo movements, typical for seatriade decades ago. Unfortunately, also the regulatory provisions for port services, the organizational arrangements and -quite frequently- the management attitudes reflect practices which had their validity in the past but are hopelessly inadequate for meeting the requirements of today's trade and transport markets.

60. Thus much of the misery is self-inflicted. As a conservative estimate: actual port capacities could be boosted by at least 35 percent without any major investment, if prevailing procedures and practices were

^{54/} The capacity figures represent a composite rating, which takes into account installations for ship-shore cargo moves, available yard and warehousing space, port internal transport facilities, as well as interfaces with inland transport systems.

^{55/} The new installations at Nhava Sheva, together with the expanded container facilities at Madras (which are presently under construction) will increase the total container handling capacity of the national port system to somewhere between 12 and 15 million tons.

brought more in line with modern port management concepts. Looking at container management, for instance, there is no compelling reason to stuff and strip more than 90 percent of the cargo within port perimeters.⁵⁶ Towering mountains of cargo and containers block preciously limited dock, yard and warehouse space. As a result, ships experience excessive pre-berthing delays and long service times while being loaded or unloaded.

61. To make matters worse, port managers frequently pursue policies and practices which create havoc in ship and cargo movements.⁵⁷ Cranes and lifting gear are not efficiently deployed -poor maintenance standards are another problem-, and labor productivity is chronically low. The additional costs caused by inefficiencies in port container handling amount to US\$ 208 per TEU on average.⁵⁸

62. Ports in India are all confronted with the meanwhile internationally pervasive clash between service mechanization and labor. Efficient modern cargo handling arrangements require a high degree of mechanization, which goes usually against employment objectives. The port industry, which is one of the largest single employers in India, is a classic case. For instance, the Port of Bombay and the Dock Labor Board employ a work force of about 40,000, of which 14,000 are registered dock workers. In addition, there are workers employed in cargo handling by freight forwarders and shipping agencies, and by the Food Corporation of India. All told there are over 160 categories of employees in the Port of Bombay. Going by the experience with successful labor redundancy schemes in other ports, elsewhere in the world, a cut of, say, 50 percent of Bombay port's labor force would have no negative effect on overall performance. In fact, it is most likely that a 'thinning out' of the work force in Indian ports would entail substantial productivity improvements.

63. What angers traders and transport operators alike are abnormally high port charges, for which little justification exist - especially in the light of poor port performance.⁵⁹ Port managers frequently pursue a practice of cross-subsidizing inefficient segments of a port with revenues from higher charges on other services. But they do it indiscriminately, and more than often the result is that services

^{56/} Which is largely due to customs requirements and other regulatory constraints.

^{57/} In 1984, a premature decision by the Bombay Port Trust to take over in-port movements of cargo with its own equipment led to 18 months of chaos.

^{58/} Because of the low efficiency of unionized labor gangs, most ship operators prefer to pay these gangs a fee for leaving the site and use their own staff -much less in number- to do the same job at substantially higher productivity rates.

^{59/} Aggravating these circumstances is the fact that there are many cases of additional charges levied on port users, such as a four percent octroi tax in Bombay.

important to trade are severely overtaxed.⁶⁰ For the port managements this route is apparently easier to take than the cumbersome path of arranging for improved efficiency among the low-performance elements in a port.

64. By far the worst situation exists in the Port of Bombay⁶¹ which is all the more critical as the Bombay metropolitan region remains the principal commercial center of India. The constantly deteriorating performance trends in the port have induced two important developments. Firstly, the Port of Kandla -further up on the West coast- has become a major outlet for exports from Northern India which are diverted from Bombay.⁶² Secondly, there has been a significant shift of seaborne cargo flows from the West coast to the East coast, largely because of the superior services available at the Port of Madras.⁶³ This port is presently a notable exception within the Indian port system. Unlike Bombay, Madras has an aggressive management team, that is willing to take risks and to launch unconventional initiatives, and a productive labor force that is less influenced by union rules. The port's strategic plans include integration with land transport systems, such as dedicated container train services, under a special deal with the railways, that will extend into the main production centers of Northern and Western India.⁶⁴ Several ocean carriers have expressed interest to arrange for their own dedicated container rail services. Since they still face container repositioning problems⁶⁵ -because the number of full import containers often exceeds the number returning full exports containers- they plan to offer the returning 'empties' for hauling cargoes with domestic origins and destinations. Such cost-cutting arrangements have

60/ Bombay still makes substantial surpluses -mostly from demurrage. Much fear in anticipation of similar developments exists with regard to Nhava Sheva for which user charges have not yet been formulated.

61/ Which was the principal reason for the Nhava Sheva initiative.

62/ The Port of Kandla has registered significant growth by improving its share in total seaborne cargo handling among Indian ports from 4.9 percent in 1985 to 13.3 percent in 1988.

63/ In 1985 the split of national seaborne cargo flows was 65/35 between West and East coast ports, by 1988 it had reversed to 45/55.

64/ Some discussions have been held to establish an Indian land bridge with Madras and Nhava Sheva -once fully operational- at each end. Such arrangements have produced significant freight transport improvements elsewhere, particularly in North America. A key requirement is, however, that existing infrastructure is amenable to handling modern transport equipment, and that all documentation and inspection procedures are highly streamlined -which is a far cry from the present situation in India. Unfortunately this observation applies also to a new facility, like Nhava Sheva.

65/ The cost of repositioning empty containers from New Delhi to Bombay or Madras is about US\$ 145/TEU.

been successfully introduced in North America and Europe. Unfortunately, Indian Railways often resist such innovative moves.⁶⁶

65. In general, however, the national port system stands little chance in the medium term of attracting mainline services on a large scale.⁶⁷ Feeder Indian import and export trades through the ports of Colombo, Dubai and Singapore will remain the organizational setup for national seaborne cargo moves for a considerable period ahead. This insight will be hard to accept for India's authorities. But it would be futile in many respects to go against these trends with regulations which will ultimately hurt trade.⁶⁸ Unless the Indian ports in general improve their performance dramatically, there is little hope for inducing the international ocean carriers to change their present service networks.

66. An essential prerequisite for bringing the national ports in line with the requirements of today's trade and transport markets, will be a coordinated national port systems management and development strategy. It is simply not affordable any longer to deal with each port in isolation from other national ports and without due consideration of the changing practices in international trade and transport. The role and function of each port in the system have to be redefined in the light of the changing environments in which these ports are positioned and have to perform.⁶⁹

67. The Inland Depot and Warehousing System: The only hope to relieve the hard-pressed national ports and to contain logistics constraints to continued trade growth is a system of inland depots where import and export cargoes are processed and cleared. Such a system would enable the ports to shed many of their present capacity limitations by allowing swift transfers of cargoes which would imply that congested port space would become available and allow more streamlined cargo handling operations. Under such conditions, the 1.5 million containers forecast for 1995 could be handled with relative efficiency.⁷⁰ But the requirements do not end here. Quite obviously, there will have to be

^{66/} APL operated six dedicated container trains between Madras and New Delhi in early 1988. This service had all the makings of success; it had to be discontinued due to opposition by the Railways' operating staff.

^{67/} The addition of Nhava Sheva is unlikely to change this situation in any significant way, as all indications point to the inescapable fact of early congestion.

^{68/} Proposals to secure a policy which progressively reserves 40 percent of the total container trade to Indian ships with mainline services into and out of national ports was put on ice in 1987 due to diverging views among ministries and protests by Indian shippers.

^{69/} Importantly, also the Indian ports have to make efforts to establish effective communication links among each other and with the trade and transport industries. EDI networks are benefitting ports in a substantial way worldwide.

^{70/} Without major new investments required in ports.

well functioning land transport arrangements that ensure unimpeded and fast movement of containers between the ports and the depot network.

68. Realizing the potential benefits of such an approach the Government commissioned Indian Railways to establish Inland Container Depots (ICDs) in strategic locations. Thus a total of seven ICDs was brought on stream during the last few years.⁷¹ As a concept, the ICDs are considered as 'dry ports' which are meant to serve cargo transfer and distribution functions for their respective hinterlands. Taking it from there, the plan is to devise a complementary or satellite system of container freight stations (CFSs) and warehouses which would serve as centers for cargo consolidation and clearance.

69. Brilliant as the concept is, the maze of prevailing attitudes, vested interests, outdated practices and regulations has caused major setbacks in the well meant attempts to improve a largely hopeless situation. Firstly, it is the management of the ICDs. While Indian Railways are officially in charge, they have subcontracted the facility operations to other parties, who in turn have subcontracted again other interests.⁷² Secondly, it is the physical setup of the ICDs. The structures and available equipment in these facilities are very inadequate. The labor force is unmotivated, and -overshadowing everything- the customs service is simply appalling.⁷³ Finally, and possibly the most important drawback, is the very unreliable rail haulage of containers between ports and the ICDs. This is the prime reason for the still very low use of this system.⁷⁴ Yet, exporters have to use the ICDs if they want to ship their cargoes in containers to the ports. There is hardly any trucking of bonded export containers. Sending their consignments in breakbulk form for stuffing to the CFSs in the ports will invariably confront exporters with lengthy delays. But transshipment through the ICDs means in many cases additional costs through double-handling and transport -particularly for exporters who are located between the ICDs and the ports.

70. The truth is that today's ICDs are not functioning in accordance with the concept of a 'dry port' which is supplemented by freight

^{71/} ICDs are presently available in Anaparti, Bangalore, Coimbatore, Guntur, Guwhati, Ludhiana, and New Delhi.

^{72/} In the case of the New Delhi ICD, Pragati Maidan, Indian Railways contracted SCI to run the facility, who in turn contracted a freight forwarder, who finally contracted a haulier. The second contract was ultimately discontinued, and SCI is now dealing with the haulier directly.

^{73/} Compounding these circumstances is the fact that in several instances, space in the ICDs is blocked by substantial numbers of containers filled with unclaimed or abandoned cargo.

^{74/} Less than 10 percent of all import and export containers are channeled through the ICD system.

stations. In fact, in almost all situations, the ICDs serve as cargo consolidation and clearance centers -a role to be fulfilled by the freight stations. Thus there are presently two parallel systems of inland warehousing facilities for export and import trades, the only difference is that the ICDs have rail connections. The picture would not be complete without mentioning the 16 CFSs which were established and are run by the railways as service centers for domestically traded commodities which are shipped in containers.

71. Warehousing has a long tradition in India. Basically, this concept was driven by the need to establish facilities in rural areas and urban centers in order to ensure effective storage and distribution of essential commodities. The system is administered by the Central Warehousing Corporation (CWC),⁷⁵ which is complemented by 16 State Warehousing Corporations (SWCs). Together, the CWC and the SWCs have a monopoly in overseeing a network of 1,515 warehouses which are spread all over the country. Gradually and over time some 155 bonded warehouses were established,⁷⁶ essentially to enforce customs and excise regulations.⁷⁷ All these warehouses are common-user facilities but since they are run under bureaucratic rules, much inefficiency exists -despite the fact that private operators provide cargo handling services in most CWC and SWC facilities. With the tariff increase of May 1, 1989, the costs of cargo handling in the CFS system have become excessive.

72. It was only in 1983 that the first CFS for export and import trades was established in India -another indication of the country's late awakening to the changing international trade and transport scene. In addition to this facility in Bombay, there is now also a CFS in Madras and one in New Delhi. But this is the extent to which it goes! The extremely limited availability of CFSs explains why the ICDs are used as clearance centers. The customs authorities have a very tight grip on all these facilities. The situation is particularly critical in ports where the CFSs and bonded warehouses occupy large tracts of land, and the port managers have no control over the utilization of these assets.⁷⁸

73. With some considerable reluctance the authorities have allowed private bonded warehouses in the case of a few importers and exporters that generate entire wagonloads of cargo transported by dedicated unit

^{75/} CWC is under the Ministry of Food and Civil Supplies.

^{76/} Of which 34 are located in ports and 121 at inland locations.

^{77/} Asserting its assigned role, CWC was successful in changing practices which previously allowed customs officers to inspect cargo at exporters' premises.

^{78/} Managers in the Port of Madras indicated that overall port productivity could be substantially increased if the CWC and Customs controlled warehousing installations could be moved outside the port perimeters. As an exception in Madras, some non-contentious commodities, especially agro-industrial products (like onions -a major export to Southeast Asia) and seafood can be stuffed into containers outside the port.

trains.⁷⁹ But this an exception rather than a rule, and in any case, the beneficiaries of such exceptions have to make many special arrangements⁸⁰ to satisfy the responsible authorities. Furthermore, these rules apply to FCLs only. LCL cargoes have to be handled in public warehouses.

74. Since more and more mid-size and even smaller manufacturers enter the export market, there is an increasing demand to cater for their special requirements. Because these firms produce relatively small quantities which often are less than container loads (LCLs), and since there is the already reported requirement among foreign importers to ship full container loads (FCLs), consolidation services are needed. But many of the smaller firms also do not have sufficient storage space and -even more importantly- do not have access to EDI links, which makes them turn to providers of such services. As a result, there is a rapidly spreading network in India of privately-run warehouses with EDI links that cater for these special requirements. But all this happens completely outside the official warehousing hierarchy, and the authorities insist that cargoes handled in the private facilities are ultimately channeled through the public system.

75. The public administration is now trying to arrange for streamlining this unwieldy system and to extend the geographic coverage of ICDs, CFSs and bonded warehouses. A target under the 8th Five-year Plan is to establish a network of 11 ICDs and 15 satellite CFSs throughout the country.⁸¹ Among these will be one of the world's largest 'dry ports' capable of handling 300,000 containers by the year 2000.⁸² It is being constructed at Tughlakabad near New Delhi. But judging by the limited progress made to date with installing this facility, there is justified reason for having doubts about the feasibility of these ambitious plans.⁸³ Better orchestration of the arrangements for plan implementation is required.

76. To ensure such coordination, the Government acted upon a recommendation by the Railway Reforms Committee in 1986, and passed legislation for establishing a central body responsible for inland container transport and handling. As a result, the Container Corporation of India (CONCOR) was created. But it took almost three years for CONCOR

^{79/} The national branch of the XEROX Corporation in Northern India is an example.

^{80/} Such as paying -2.5 times the salary- and accommodating customs inspectors.

^{81/} This system is to be expanded to 21 ICDs and 57 CFSs by the year 2000.

^{82/} Which would represent a gargantuan leap forward, considering that the currently largest ICD -the one in New Delhi- has a design capacity of 500 TEU per month, although 25,000 TEU were handled in 1988.

^{83/} Early availability of the Tughlakabad ICD will be crucial for the success of Nhava Sheva in efficiently catering for the rapidly increasing container flows.

to become a functioning entity.⁸⁴ CONCOR's budgetary allocations are 13 crores of Rupees for 1989, which would be additional to the 5 crores of Rupees which the Corporation presently holds. A decision was taken to place CONCOR under the auspices of the Ministry of Railways. Much infighting has taken place over filling the management positions, and the lower ranks remain largely to be staffed. Therefore, how long will it take for CONCOR to become truly effective? Are the budgetary provisions sufficient in view of the ambitious ICD development program? And furthermore, was it a good decision to place an agency which should have an unbiased multi-modal orientation under the railways? Already now, there are complaints from the trading and transport communities that CONCOR will not have user representation on its board. Instead, only Government offices will be included. Will CONCOR thus have the necessary commercial outlook and be able to deal with the special market needs effectively? CONCOR still has to finalize its corporate plan and devise its modus operandi, but there are already too many uncomfortable question marks. A situation which is not necessarily instilling confidence among those elements of the national economy that are heavily counted on for improving India's trade performance.

The Cargo Management Services

77. The Shipping Agents: Possibly the most innovative element in the entire framework of trade logistics in India is the local agent of foreign carriers. As foreign transport enterprises are not allowed to have branch offices in the country, they rely on contracted local agents to organize efficient arrangements for serving the logistics needs of the trading community. The fact that over 60 percent of India's exports are on f.o.b. terms really means that decisions over transport arrangements are made outside India to a considerable extent. It is then the local agent who has to follow up from there and ensure that logistics arrangements are made which meet the tightly scheduled service provisions by his employer -in most cases a reputable international ocean carrier-whose service organization is, in turn, shaped by the international shippers' special requirements. And, indeed, under the competitive pressures of these external market forces, the local agents have been in the forefront of introducing innovative logistics arrangements in India -to the extent the system allowed them to do so.⁸⁵ Without these agents, the trade logistics management situation in the country would be much worse than it actually is.

^{84/} According to the latest information, CONCOR will be functional by June 1989.

^{85/} Possibly most helpful was the freedom foreign operators enjoy in arranging for multi-modal transport and related combined transport documents, which their Indian counterparts can not do under present legislative provisions.

78. But the agents' and ultimately their foreign employers' success bred envy among the less fortunate domestic operators. Allegations of overcharging for services and of schemes for capital flight emerged as a manifestation of the 'losers' frustrations over their inability to be as efficient as their foreign competition. There have been occasional suggestions -and presently much discussion is held within various local circles- to curtail the agents' freedom to maneuver. Considering the current largely ineffective logistics setup, such a move would have catastrophic consequences for trade -a high price to pay for the protection of less efficient domestic operators.

79. While such conclusion is beyond dispute, it is at the same time fair to say that the domestic operator is at a considerable disadvantage. Not only is he constrained in organizing multi-modal transport arrangements and has no right to issue combined transport documents -he can also not deal with the shipper directly because Indian law requires a customs house agent as intermediary between shipper and transporter.⁸⁶ The question then is: do all these existing constraints not unduly curtail the development of a competitive Indian trade logistics service industry? And, given a chance, could Indian operators develop service arrangements which would seriously challenge the foreign competition? Without any doubt, the answer would be positive!

80. The Freight forwarders: This is an international business which has also in India a long tradition.⁸⁷ But Indian freight forwarders have always been rather small undertakings.⁸⁸ Accordingly is their public image, and most Government officials still talk about 'fly-by-night' entrepreneurs. There is little confidence in their activities and, indeed, in their seriousness as far as business conduct is concerned.⁸⁹ While there may have been justification for many of these sentiments in the past -and possibly also in some isolated cases today- the Indian freight forwarding profession has come a long way. For instance, it is the local freight forwarder who organizes 'groupage' of small

^{86/} Which also applies to foreign operators but usually their local agents hold a customs broker license, and thus direct shipper-transporter contacts are possible.

^{87/} There are as many as 700 organizations in India engaged in the business of clearing and forwarding.

^{88/} They usually had their beginning as customs house agents, who have increasingly converted into C&F agents providing services to clear imports and to forward exports.

^{89/} Not surprisingly, the insurance industry and the banking sector therefore consider freight forwarding in India as a high risk business, and they are usually very reluctant to cover liabilities associated with these activities. Also, the debate over the right of local freight forwarders to issue combined transport documents is heavily overshadowed by fears of potential fraud and capital flight.

consignments⁹⁰ and communications links for the lower end of the production sector. It is also the freight forwarder who has been very instrumental in organizing transport of domestically traded commodities. Furthermore, with their knowledge of local conditions and practices, several Indian freight forwarders have been able to lift the performance under some services above the norms for similar services provided by the foreign shipping community.⁹¹

81. The more aggressive among the Indian freight forwarders aim now at a new market niche, which their foreign counterparts have penetrated so effectively in their own countries. Reference is made here to the Non-Vessel-Ownning-Common-Carrier (NVOCC). When freight forwarders can be considered as retailers, the NVOCC is a wholesaler who deals with another wholesaler, namely the ocean carrier. NVOCCs can build up considerable bargaining power vis-a-vis the carriers by amassing large quantities of cargo from different sources and auctioning these off on the transport market. Carriers dread such developments as they usually entail massive freight rate deterioration. Thus a local NVOCC community would be extremely beneficial for India's trade. The sad fact is, however, that the current regulatory environment does not make it easy for a freight forwarder to turn NVOCC.⁹² And, as can be expected, the international carrier lobby does everything possible to maintain the status quo.⁹³

82. The Shippers: There are some shippers in India who, by virtue of the substantial volumes of commodities they produce, have set up their own logistics organizations. Furthermore, the ten large trading houses that exist in the country act as 'super freight forwarders' in many ways. In addition to their own products, they buy commodities from smaller manufacturers and subsequently market these under their own arrangements.⁹⁴ Their influence on the logistics scene is indeed formidable -considering that a group like TATA Industries stands behind 25 to 30 percent of Indian exports.

^{90/} But the legal provision which makes it impossible for Indian freight forwarders to operate bonded warehouses undermines much of the gains achieved through groupage.

^{91/} As of late, some local freight forwarders have managed to stuff 30 cu.m. of garment into a Twenty-foot container, while 23-25 cu.m. is the norm for most shipping lines.

^{92/} In addition to constraints like restrictions on the issuance of combined transport documents and comprehensive liability coverage, the Government also requires relatively heavy cash flow and equity criteria to be met by freight forwarders who intend to venture into the NVOCC business.

^{93/} As an exception, Indian and Soviet interests have recently established a joint freight forwarding group -INDSOTRA- that will organize cargo movements between these two countries.

^{94/} To illustrate this point: Hindustanlever -a joint venture of Unilever and local interests- is in the market with 50 percent of its own products, while the other 50 percent of their activities are related to merchandise acquired from other parties.

83. But possibly more than in the foreign trade sector, the self-organized Indian shippers are most actively involved in domestic trades. They are running vast systems of their own warehouses which are located as entrepôts between their production and consumption centers.⁹⁵ Following the successful reorganization of inventory management among their foreign counterparts, Indian traders have now initiated efforts to reduce stocks -which in turn will result in less capital commitments.⁹⁶ Obviously, transport is an important element of such system management organization. Most of the large shippers used to rely heavily on the railways for hauling their merchandise between the production and consumption centers. Until recently, up to 30 percent of these moves took place by rail. Today, this percentage has declined to just over five percent, and most haulage is done through trucking services.⁹⁷

84. There is a strong demand among the large shipper groups for container transport in the domestic market. Today, less than five percent of domestically traded commodities is moved containerized. The key constraint is shortage of containers, a problem which is said to rest entirely with the railways. Shippers indicate that they are willing to guarantee annual cargo volumes against an undertaking to provide the required container capacity. The question then is: can the railways organize such a system, or even should they? Much discussion goes on about container leasing and the establishment of a corresponding leasing industry. Going by the experience in other countries, such arrangements would serve to largely overcome existing capacity constraints. There are also several entrepreneurs in India who would be willing to venture into such business. But those who presently hold the monopolies in this sector, such as the railways and SCI, appear to have little inclination to go along with this proposal by Indian business circles. Furthermore, there are deeply rooted fears in some public administration circles about the alleged potential for tax evasion and capital flight, if leasing through private sector initiatives would develop on a larger scale.

85. Looking back at all the points made in this chapter, it becomes easily apparent that trade logistics arrangements in India are under a dark cloud. With all the innovations in cargo management that have been progressively instituted in the international trade and transport markets, India's economy now faces serious threats because the country has not followed these international developments at the same pace. Instead, the local trade logistics system continues to be bogged down

^{95/} A typical setup comprises 50 production facilities and 500 targeted consumption centers, as in the case of Hindustanlevar.

^{98/} Their target is to run inventories on the basis of a turnover of seven days; presently the average is 30 days.

^{97/} Apparently, the railways have become nervous about these trends, and one shipper reported that they were able to sign a service contract with the railways. Under this contract, the railways undertook to provide scheduled dedicated service every six days -a promise that was largely kept- against the shipper's guarantee to provide a minimum of 250 tons of cargo per month.

through a whole series of true or imagined concerns among national private or public sector groups. Certainly, national values and policy objectives are vital elements of economic and social strategies, but a clearer perception of who benefits from what is dearly needed. Presently, it appears as if India's trade sector is expected to make sacrifices for the sake of sustaining a rather derelict national freight, and more specifically container transport system. The question then is: what is more important for the economy in the longer run -promotion of trade or maintenance of an outmoded logistics service sector?

VI. THE PUBLIC ADMINISTRATION AND TRADE LOGISTICS MANAGEMENT

86. As in the case of the local trade and transport circles, the Indian public administration was caught by surprise when containerization started to penetrate domestic markets at steadily increasing rates. The central planners had initially regarded containerization as a state-of-the-art development which would only happen very slowly in India, and consequently did not take the concept very seriously. Container terminals in ports, and container transport by rail were not even discussed in the same breadth until 1985, at the start of the current Five-year Plan. During interviews, members of the Planning Commission -the Five-year Plan think tank- stated that perceptions of containerization were genuinely very mixed until recently. Most of India's exporting textile, engineering and assembly industries were still based around the major ports. The ICDs and flatcar fleets in which the railways had invested during the early 1980s spent the first years of their lives heavily underutilized. The boom in inland container cargo has only come in the last two or three years, and before that containerization was just not considered viable as a national goal.

87. The centrally planned economy is usually justified on the grounds that India has to develop with slender means. Things cannot be left to the markets because India is huge, undercapitalized and cannot afford any waste. However, the public administration's way of going about this through state enterprises and bureaucratic policing of other businesses also creates an economy strong in choosing macro-economic directions for itself, but often weak in its attempts to manage micro systems further down. The impact of a new technology from the outside, like containerization, provides a classic example of how this system works -and where it does not. In a decision-making system that is heavily overcentralized, the lack of lead from the top on containerization sent out the wrong messages to the heavily compartmentalized bottom of the pyramid.

88. Functional agencies, like ports, railways, shipping lines, and customs were all left separately to deal with the containers that arrived in increasing numbers each year. In effect, all these agencies pursued arrangements on an interim basis by fitting containers around their existing operations. With some notable exceptions, they did little to adapt their own organizations to the new technology, and made even less

effort to coordinate on container matters with other agencies. And left to their own devices, a new cargo system like containerization easily ended up against traditional bureaucratic boundaries, with individual container movements left waiting on outdated procedures designed decades ago around conventional cargo. This process has repeated itself over and over again, from the top of the bureaucracy downwards, and across individual modes -each making minimum concessions to container traffic. It happened this way because entities like the older ports were waiting for new developments and never saw themselves as part of a strategy on container transport, or because organizations like customs will not do very much without seeing detailed changes in their rulebooks first. But with container traffic now starting to arrive in much more serious numbers, the legacy of piecemeal containerization means that the system is completely ill-equipped to take much further expansion. Major reforms are called for!

89. If the number of trade and transport industry associations is overwhelming,⁹⁸ almost the same can be said about the central government agencies that hold responsibilities -directly or indirectly- for matters related to trade logistics management. There are nine ministries,⁹⁹ seven special authorities, and numerous committees which are mandated to pursue the different aspects of trade logistics. In addition, the Reserve Bank of India (RBI) and the Foreign Exchange Dealers' Association of India (FEDAI) -in essence the commercial banking sector-, as well as the Government-run insurance industry play major roles in this respect. Furthermore, there is a whole network of regulatory bodies at the state and municipal levels which exert their influence over the conduct of trade logistics services. Finally, there are the public corporations, like the port trusts and the state-owned carriers, that add measurably to this long list. All things considered, one easily arrives at a number exceeding 150 when adding up all the different public administration bodies that control India's trade logistics network.

90. Even now that public awareness of the rapidly expanding container market and its challenge for India's trade is growing, only limited initiatives have yet been taken to facilitate container penetration in the domestic market. And these few initiatives have largely run up against major obstacles. Possibly the most cumbersome impediments are present legislative provisions. There are dozens of so-called acts that regulate the conduct of trade and related tax and foreign exchange control aspects, the provision of transport services, and the management of transport infrastructure. But these regulations have generally not been adjusted in line with the developments in the trade and transport markets which have driven major restructuring -including legislative reforms- of these networks in other economies. Going by the experience elsewhere, it becomes clear that these are very

^{98/} There are some 60 shippers councils and trade associations, and several dozen groupings which represent the transport and freight forwarding industries in India.

^{99/} The Ministries of Commerce, Communications, Finance, Food and Supplies, Industry, Labor, Planning, Railways, and Surface Transport.

time consuming processes.¹⁰⁰ Most importantly, however, the more successful cases demonstrate the instrumental role played by the private sector in these efforts. The exporters and importers, as well the transport industries in these countries could take measures which improved their efficiency -and thus their competitive stance- because their governments had established a liberal framework in which they could effectively adjust to changing market conditions.

91. The Indian public administration has the habit of setting up special committees when it comes to establishing a framework for reforms. These committees usually draw on the best expertise available in the country, and include seasoned public officials. Participation of private sector representatives is customarily limited to advisory roles. But these committees -as far as they relate to trade and transport- have generally a rather narrow focus. They usually concentrate on isolated issues, such as port reforms, revival of coastal shipping and the future development of the Indian fleet. Consequently, their deliberations do not include broader market perspectives and -very crucially- the changing international environments in which Indian trade and transport have to perform.¹⁰¹

92. It is a hard reality for every country -for that matter also for India- that international trade and transport markets have become very closely integrated and keep undergoing dramatic restructuring, which imposes stringent adjustment requirements on any nation which has ambitions to improve its trade performance in today's market. In this context, the inevitable fact that outside forces dictate trade logistics arrangements in line with their own initiatives to improve competitiveness, has to be accepted -for better or worse. Without meeting such requirements, a country will increasingly run a danger of losing its contact with the trade markets. And this situation is very real in the case of India.

93. What makes the whole process so unwieldy are the often diverging objectives and views held by different line agencies in the public sector. An almost typical example exists between the Ministries of Commerce and Finance -one party wants to facilitate the conduct of trade, and the other is keen on controlling trade and on tapping trade as major revenue source to the extent possible. This goes back to India's policies of protectionism and self-sufficiency, where restricting imports and checking foreign exchange outflows was far more important a job for the public administration than facilitating trade. Collecting duty was as big a source of income for the Government as revenues from export sales. Consequently, customs -a wing of the Ministry of Finance- have

^{100/} The U.S. Shipping Act of 1984, which has generated substantial gains in the conduct of trade related transport, was 12 years before the legislature until it could be ratified.

^{101/} An exception was the Rajwar Committee on Indian Shipping which took a broader market perspective, but the committee's main concern was how the share of the national flag carriers in international trade could be enhanced -and not how Indian trade logistics could be improved.

traditionally worked independently of trade, more than often oblivious to the fact that trade has to be moved. But in an economy where almost everything still has to have a specific ruling or dispensation, fitting in with the requirements for smooth trade flows has often determined what transport systems can and cannot do. Obviously, the bureaucratic delays hit a new and cost-intensive system of trade logistics, like containerization, worse than most. But even within particular ministries there are divergent views. For instance, in the Ministry of Surface Transport, the port and shipping wings do not see eye to eye because one wants to encourage liberalization of the cabotage trades (ports) and the other promotes maintenance of the status quo (shipping).¹⁰²

94. Clearly, in a populous country like India, employment issues loom large. Labor-intensive options in trade logistics management will be practicable only in cases where they do not interfere with the user requirements of efficient cargo packaging, handling and transport. If the Indian trade logistics network is to be improved, there is not much hope that transport services and infrastructure will be able to sustain their traditionally large workforce. But here is where the hard choices have to be made between economic and social development objectives. This issue is real in India, and it is not surprising that substantial differences of opinion exist in this respect between the Ministry of Labor and the other line agencies. The attitudes and lobbying power of the labor unions only add to these already difficult circumstances.

95. Despite this rather gloomy situation, some affirmative action is taking place -if still on the margin. A national information center (NIC) was established by the Ministry of Commerce. NIC is meant to ultimately serve the intelligence needs of trade and transport -much action is still necessary to get it there. EDI network planning was started in February 1989 under the auspices of the Chief Controller of Imports and Exports. A special group has been formed in the Prime Minister's office to study ways and means for establishing effective electronic networking in India.

96. Possibly the most important initiative for the trade logistics sector was taken under the leadership of RBI.¹⁰³ Together with representatives of FEDAI, the Ministry of Surface Transport, the General Insurance Corporation of India, and the national ocean shipping industry, RBI set out to devise a plan for establishing a framework for combined

^{102/} This issue arose over the continuing trend among international ocean carriers to serve the Indian market through feeder services out of the load centers Singapore, Colombo or Dubai. The national port community believes that by allowing foreign carriers to organize coastal feeder services, Indian load centers would emerge in Bombay (or Nhava Sheva) for the West coast and Madras for the East coast. At the same time, dwindling traffic at the other Indian ports would be revitalized. In contrast, the national flag carriers fear that such move would further erode their already fragile stance in the seetrade market.

^{103/} The Srinivasan Committee.

transport documents¹⁰⁴ to facilitate multi-modal transport arrangements -which is one of the key prerequisites for effective container trades. The intention is to make such arrangements easier to institute by Indian shippers and carriers.¹⁰⁵ This task was extremely onerous as all existing relevant legislation with regard to liabilities, taxes applicable to trade and transport, foreign exchange regulations, carriage and sale of goods had to be vetted for required amendments. The deliberations resulted in a proposal for a (Multi-modal) Combined Transport of Goods Act. To make it work, substantial changes will have to be effected in several existing laws that govern the conduct of trade and transport. Unfortunately, the proposed act has been before the cabinet for almost two years, without any affirmative action taken yet. This and other similar cases seem to demonstrate how difficult it is for the Indian public administration to face up to today's market realities, and to take corrective measures -in the best interest of the economy.

97. The bottom line is that the public administration has to reconsider national priorities and objectives in light of the changing environments -and notably practices- in the international trade and transport markets. If India wants to catch up with, if not outperform its trade competitors, then there is no alternative to substantial reorganization of its trade logistics system. Of possibly even higher importance is the need to generate enough foreign exchange income through improved trade performance, which is required to ease the transition of the Indian nation into a modern economy based on effective technologies and production as well as distribution processes. This would also reduce the country's vulnerability to shocks in the international economy. At the same time, economic and social services on the domestic scene could be more efficiently provided.

98. Questions that are likely to feature prominently in this debate include:

- * To what extent should the public sector remain involved in the management of trade logistics networks?
- * How much can the rules and regulations that govern the conduct of trade logistics, and their enforcement be relaxed?

^{104/} Which were drafted in conformity with standardized forms issued by the International Chamber of Commerce and the International Federation of Freight Forwarders Associations.

^{105/} A major drawback was that the national freight forwarders were not involved, and the proposals elaborated by the Committee reflect little, if anything, to improve the role and function of Indian forwarders in trade logistics management.

- * Should public corporations that provide trade related warehousing and transport services be given more autonomy and basically be organized on commercial principles?
- * Should private market forces be permitted to take over a more substantial share in trade logistics service functions?
- * Can the experience with related system adjustments in other countries provide guidance for trade logistics reforms in India?
- * Which options could be considered to contain employment issues that are likely to result from the required mechanization of logistics arrangements?
- * What are the trade offs between transport industry protection and trade performance, and to what extent should the national transport industry, especially ocean shipping, remain protected?
- * How could the organization of planning and managing the national trade logistics system be improved?
- * Which interventions are required, how will they affect the provision of trade logistics services, what is their scope, and how should they be sequenced?
- * How much investment is required, and what is the likely incidence of annual current costs?

and finally

- * What options could be considered for financing expected capital and current costs?

VII. THE FINANCIAL DIMENSION

99. It is extremely difficult, if not impossible, to determine the true capital requirements for developing and operating an efficient trade logistics system in India. The difficulty lies in the fact that most of the existing transport, warehousing and communication facilities are not utilized to their full capacity potential. Regulatory constraints, ineffectual management and burdensome labor rules are the principal reasons. The case was made about the national port system. Productivity of existing assets could be boosted around 35 percent if port operations would be brought more in line with management practices which are common in the more successful terminals elsewhere in the world. Obviously, such

possible productivity gains would serve to reduce perceived investment needs on a major scale. The same observation applies to warehousing, and -to a considerable extent- to the railways. The situation in the highway sector is substantially different because of the technical limitations of most roads, and shortage of special trucking equipment. Similarly, the communications sector is critically limited in its capacity to accommodate the growing electronic networking requirements of trade and transport.

100. A consolidated assessment of all perceived investment needs in the trade logistics sector does not exist. Such need assessments are presently rather fragmentary; they are the outcome of deliberations by the various committees, established to study issues in different sectors of the national trade logistics system.

Estimated Capital Investment Requirements until the Year 2000
in different segments of the Indian Trade Logistics System

Sector	Investment Needs ¹⁰⁶ (US\$, billion)
Ocean Shipping	6.13
Coastal Shipping	1.82
Ports	2.50
Railways	
Track and Facilities	4.60
Rolling Stock	2.20
Highways	6.40
Trucking Industry	1.50*
Aviation	
Cargo Carriers	3.50*
Airports	2.05*
Warehousing (ICDs/CFSSs)	0.75
Communication Networks	0.55*
<u>Total</u>	<u>32.00</u>

(Note: April 1989 costs, inflated to cover the period under consideration.)

101. The above estimates are based on the assumption that the modal shares in container transport will not change significantly, i.e. railways remain the principal mode for land transport. It is, however, by no means clear that such arrangement would yield the lowest overall investment package -and maximum service efficiency. Consequently, it has to be recognized and accepted that under these present circumstances, any investment to establish new or expanded cargo handling, warehousing or transport facilities is not certain to yield optimal benefits. Not only

^{106/} Essentially to cater for container trades. Estimates by different committees, supplemented by Bank estimates (identified by an asterisk).

will the utilization of such physical assets be dampened because of the prevailing operational constraints, it is also not assured that the modal choice coincides with market preferences.

VIII. AN AGENDA FOR REFORM

102. First and foremost, the country needs a strategy for adjusting its logistics system to the changing environments in international trade and transport markets. The container will be central to such a strategy. At the same time, a plan has to be developed which will provide for necessary system adaptations so that the efficiency potential of containerization can also be tapped for improving the domestic trades. To achieve this, two of the presently existing shortcomings in this context have to be rectified. Firstly, it is the high degree of fragmentation in the public administration with regard to systems planning, control and management. Secondly, it is the limited involvement of the private sector in problem assessments and decision-making as regards the development and management of trade logistics networks.

103. Given the urgency of required system adjustments in line with market demands, a joint public-private sector task force should be appointed to establish an agenda for market surveys and system analyses which will identify shortcomings and improvement needs. Taking it from there, the task force should formulate an action plan aimed at correcting existing constraints and streamlining processes related to cargo handling and transport. This group should be organized along the lines of the Simplification of International Trade Procedures Boards (SITPRO) which have been established by many governments¹⁰⁷ to spearhead trade logistics system adjustment programs. There have been attempts in India to follow this route, and a body called INDPRO was established some time ago. INDPRO's self-proclaimed objective is 'to act as freight/trade facilitation organization dealing with the rationalization and modernization of international trade procedures in India, and the development of electronic data processing techniques'. But INDPRO has been ineffectual, largely because support by the public administration was lacking. To succeed in any effort to improve trade logistics in India, the full and unequivocal commitment and support of the Government will be needed. This should be one of the highest priorities in managing the national economy!

104. Following the establishment of a national trade logistics management strategy, the role and function of each element in the system should be defined. Based on such definition, strategic plans will have to be formulated for the development and management of each subsystem, as they relate to the provision of trade logistics services -the shipping, railway, road and air transport sectors, as well as the port and

^{107/} Great Britain was the first country to take these steps, most other European countries have followed, but also developing countries have been successful in taking this route (e.g. Sri Lanka).

warehousing systems.¹⁰⁸ There has to be a harmonized decision-making framework -derived from assessments of comparative advantage- for planned investments in individual elements of the national trade logistics network. Furthermore, and in line with the assigned roles and functions, the organizational and staffing setup for each subsystem have to be reconsidered -and redefined, if necessary. The piecemeal approach of the past has clearly demonstrated its failure to effect improvements. More autonomy is needed for the public entities, who should be required to provide their services on a commercial basis in the context of well defined corporate plans. Ultimately, the market should judge their utility, not the public administration. They should be given a degree of latitude that enables them to shed burdens, like abandoned cargo. Furthermore, the import duty impositions for vitally required equipment and spares should be lifted -at least they should be significantly reduced.

105. Hand in hand with the formulation of development and management strategies for the individual elements of the trade logistics system, there will have to be a program that addresses the regulatory and control net that is cast over the entire system and strangles its performance. Clearly, customs ranks on top. And again, much can be derived from successful initiatives in other countries, such as the introduction of the Customs Single Administration Document. The proposed Combined Transport Document should be ratified without any further delay, and required amendments to existing regulations that apply to the conduct of trade logistics services should be implemented with highest priority. It should be understood that little, if anything, can be expected in terms of system performance improvements without removal of these regulatory and control constraints.

106. Very important in all these considerations is the private sector. Constraints that inhibit initiatives should be removed, as much can be gained for the national economy by leaving the market forces room to maneuver. In particular the national freight forwarding industry should be given more encouragement -together with the required relaxation of regulations that govern this business. In their drive to venture into NVOCC activities, the national freight forwarders can be expected to generate substantial performance improvements for Indian trade.

107. With regard to capital requirements, the Government would be well advised to seriously consider partnerships with private interests. Most enterprises involved in trade logistics service in India, have indicated their preparedness to invest in facilities, if there were a more liberal framework in which they could make their marketing and service arrangements. Of particular importance in this context is the concept of equipment leasing, which can extend from containers over port

^{108/} As was demonstrated earlier, there is a need to get away from dealing with modal development schemes in isolation -as in the case of ports.

or warehouse handling gear to rolling stock on rail or road.¹⁰⁹ Another concept of substantial attractiveness is the privatization of facility operations, such as container terminals in ports.¹¹⁰ In many neighboring countries, such as Malaysia, substantial efficiency gains were achieved through privatization. In fact, discussions along these lines have taken place in many circles of the Indian logistics network in the recent past. The impression is that if privatization means greater efficiency and productivity, then a privately operated facility is likely to prove more attractive to traders and carriers than one that is bogged down in red tape. Also, if privatization involves large, highly integrated corporate structures, large firms or multi-nationals, then it is probable that a facility will be developed with strong links into efficient logistics networks. Thus the opportunity with privatization is the development of new and efficient facilities which would ultimately improve trade performance.

108. It should be clear from all the observations made in this report that India finds itself at a critical cross-road. The outside world has gone through fundamental changes in trade management, while the national economy has fallen behind in trying to keep up with these developments. A large population, limited resources and the need to spur economic and social development on a broad basis have constrained the Government's ability to arrange for effective adjustments to the rapidly progressing advances in trade and transport markets. The time has come to take stock and to readjust if national economic development is to continue its upward trend. But fundamental questions loom large over the advisability of continuing with practices that appear to lose their relevance -and, in fact, do more harm than good. Serious consideration has to be given to system reforms in the trade logistics sector.

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^{109/} Many foreign ocean carriers are interested in this concept as they have accounts in Indian banks in the Rupee equivalent of millions US Dollars which they cannot repatriate because of exchange controls. They would favor a deal between the lines and the Government which would enable the carriers to use these funds productively through purchase of equipment -either for own use or for leasing- to be provided for logistics services.

^{110/} Several European, Japanese and U.S. carriers have indicated their interest in operating container terminals in Madras and Nhava Sheva. They would also be willing to run warehousing complexes.

SOURCES OF INFORMATION

A. Trade and Industry Organizations

- * Federation of Indian Chambers of Commerce and Industry
- * The Associated Chambers of Commerce and Industry of India
- * Northern India Chamber of Commerce and Industry
- * Western India Chamber of Commerce and Industry
- * Southern India Chamber of Commerce and Industry
- * Bombay Chamber of Commerce and Industry
- * Punjab Chamber of Commerce and Industry
- * Members of the Indian Chapter of the International Chamber of Commerce
- * All India Shippers Council
- * Indian Merchants Chambers
- * Northern India Shippers Council
- * Western India Shippers Association
- * Southern India Shippers Association
- * Federation of Indian Exporters Organizations
- * All India Meat and Lifestock Exporters Association
- * Engineering Products Export Council
- * Handloom Products Export Council

B. Trading Houses

- * American Merchandise Corporation
- * Amersey
- * Benares House
- * CNA Group
- * Dotsal
- * Hindustanlever
- * Metro Exports
- * Schokhi Industrials
- * Tata Exports
- * Zodiac

C. Freight Handling Services

- * Federation of Freight Forwarders Associations of India (FFFAI)
- * FFFAI members in Bombay, Madras and New Delhi
- * All India Custom House Agents Association
- * Custom House Agents Associations in Bombay, Madras and New Delhi
- * Airfreight Clearing and Forwarding Agents in Bombay and New Delhi
- * Foreign NVOCCs: Allcargoes Express, Javelin, and Seaway

D. Land Cargo Transport Services

- * All India Motor Transport Congress
- * Trucking companies in Bombay, Madras and New Delhi
- * Northern, Central and Western Railways

E. Air Cargo Transport Services

- * Air India
- * Indian Airlines
- * Continental Carriers
- * Lufthansa

F. Seatrade Services

INDIAN CARRIERS

- * Chowgule Steamships
- * Great Eastern Shipping Corporation
- * India Steamship Corporation
- * Shipping Corporation of India
- * The Scindia Steam Navigation Corporation

U.S. CARRIERS

- * American President Lines
- * Lykes Lines
- * Sea-Land Corporation
- * Waterman-Isthmian Steamship Corporation

EUROPEAN CARRIERS

- * Hapag-Lloyd
- * Hoegh Lines
- * Maersk Line
- * NedLloyd
- * P&OCL

ASIAN CARRIERS

- * Kawasaki Kisen Kaisha Ltd. ('K' Line)
- * Neptune Orient Lines
- * YangMing Marine Transport Corporation

FEEDER SERVICES

- * Regional Container Lines
- * Bengal Tiger Line

G. Transport Agents

- * Forbes, Forbes, Campbell & Co
- * Patel Volkart
- * Shaw Wallace
- * Volkart Fleming
- * United Liner Agencies
- * Worldwide Cargo Care

H. Maritime Transport Industry Organizations

- * Indian National Shipowners Association
- * Indian Register of Shipping
- * Bombay Steamers Association
- * Madras Steamship Association

I. Port Organizations

- * Indian Ports Association
- * Bombay Port Trust
- * Madras Port Trust
- * Nhava Sheva Port Trust

J. Maritime Training Institutions

- * Maritime Training Institute Bombay
- * National Institute for Port Management Madras

K. Container Management Agencies

- * Container Corporation of India
- * Inland Container Depot New Delhi
- * Central Warehousing Corporation
- * Sealord Containers Ltd.
- * Lemuir Containers

L. Organizations involved in Cargo Documentation and Insurance

- * Reserve Bank of India
- * Foreign Exchange Dealers Association of India
- * General Insurance Corporation of India
- * United India Insurance Corporation

M. Banking Services

- * Indian Bank
- * The Shipping Credit and Investment Company of India

N. Central Government Institutions

- * Ministry of Commerce
- * Ministry of Railways
- * Ministry of Surface Transport
- * Indian Institute of Foreign Trade
- * Central Board of Excise and Customs
- * Directorate of Customs Madras

O. Consultants

- * International Information Systems (working on trade and transport related software development)
- * A.F. Ferguson & Co (working on transport issues in export trades)
- * RITES (working on container management aspects)
- * TECNECON (working on national ports and coastal shipping studies)

P. Action Committees

- * Pradhan Committee on Coastal Shipping
- * Rajwar Committee on Indian Shipping
- * Srinivasan Committee on Trade Document Simplification
- * Major Ports Reform Committee